WHAT IS CLAIMED IS:

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1. A combination weighing apparatus for combining and discharging articles, said combination weighing apparatus comprising:

a plurality of hoppers that hold the articles;

memory means that stores said plurality of hoppers dividing them into a first group and a second group;

specification means for specifying a discharge from at least one hopper in said first group based upon a predetermined criterion;

weighing means for weighing articles held in said hoppers, said weighing means being provided at least in said hoppers in said second group;

selection means for conducting a combination calculation using the weights of said hoppers obtained by said weighing means, and selecting hoppers based on the combination calculation such that a total weight of said selected hoppers is within a predetermined weight range; and

discharge means for discharging the articles held in said hoppers selected by said selection means and in the articles said hopper specified by said specification means.

2. The combination weighing apparatus according to claim 1, wherein said hoppers in said first group and said second group are configured so as to hold different types of articles.

3. The combination weighing apparatus according to claim 1, wherein said weighing means is disposed in at least one hopper in each of said first and second groups.

4. The combination weighing apparatus according to claim 3, wherein said selection means selects hoppers in one of a first selection mode and a second selection mode, in said first selection mode said selection means conducting the combination calculation and selecting hoppers from only said second group such that the total weight of selected hoppers is within the predetermined weight range, in said second selection mode said selection means conducting a combination

Sub A' cont

calculation and selecting hoppers from both said first and second groups such that the total weight of selected hoppers is within the predetermined weight range;

said discharge means conducts one of a first discharge mode and a second discharge mode, in said first discharge mode said discharge means discharging articles from the hoppers in said second group selected by said selection means in said first selection mode and the articles in the hopper specified by said specification means, in said second discharge mode said discharge means discharging articles selected by said selection means in said second selection mode; and

said combination weighing apparatus further comprises measurement switching means for switching between said first and second selection modes of said selection means and between said first and second discharge modes of said discharge means.

5. The combination weighing apparatus according to claim 3, wherein said selection means subtracts the weight of said hopper in said first group specified by said specification means from the predetermined weight range to obtain a reduced weight range, and conducts the combination calculation and selects hoppers from said second group such that the total weight of the selected hoppers is within the reduced weight range.

6. The combination weighing apparatus according to claim 1, wherein said predetermined criterion of said specification means is based upon a random number signal.

7. The combination weighing apparatus according to claim 1, wherein said predetermined criterion of said specification means is based upon periodic conditions.

8. The combination weighing apparatus according to claim 1, wherein said predetermined criterion of said specification means is based upon ratio conditions.

9. The combination weighing apparatus according to claim 6, wherein

Sub A' Cont'd

said specification means further includes a continuous discharge criterion under which a discharge from said hopper in said first group is continuously specified; and

said combination weighing apparatus further comprises discharge switching means that switches between said predetermined criterion and said continuous discharge criterion.

10. The combination weighing apparatus according to claim 7, wherein said specification means further includes a continuous discharge criterion under which a discharge from said hopper in said first group is continuously specified; and

said combination weighing apparatus further comprises discharge switching means that switches between said predetermined criterion and said continuous discharge criterion.

11. The combination weighing apparatus according to claim 8, wherein said specification means further includes a continuous discharge criterion under which a discharge from said hopper in said first group is continuously specified; and

said combination weighing apparatus further comprises discharge switching means that switches between said predetermined criterion and said continuous discharge criterion.

12. A combination weighing apparatus for combining and discharging articles, said combination weighing apparatus comprising:

a plurality of hoppers that hold the articles;

a plurality of load cells provided in at least one of said hoppers;

an operation panel for receiving an operator's input;

a controller operatively connected to said plurality of hoppers, said plurality of load cells, and said operation panel, said controller selecting hoppers for discharge based on at least one of a first criterion of combination calculation and a second criterion set by the operator, said first and second criteria each being applied to at least one of said hoppers, under said first criterion said controller selecting hoppers

Sub A' cont'd

such that the total weight of selected hoppers as determined by said load cells is within a predetermined weight range;

a chute for discharging the articles held in said selected hoppers selected by said controller.

13. The combination weighing apparatus according to claim 12, wherein said load cells are disposed in all of said hoppers.

14. The combination weighing apparatus according to claim 13, wherein said controller selects hoppers in one of a first selection mode and a second selection mode, in said first selection mode said controller conducting the combination calculation and selecting hoppers from all of said hoppers except the hopper to which said second criterion is applied such that the total weight of selected hoppers is within the predetermined weight range, in said second selection mode said controller conducting a combination calculation and selecting hoppers from all of said hoppers such that the total weight of selected hoppers is within the predetermined weight range; and

said controller switches between said first and second selection modes based on the operator's input.

15. The combination weighing apparatus according to claim 13, wherein said controller subtracts the weight of said hopper selected according to said second criterion from the predetermined weight range to obtain a reduced weight range, and selects hoppers according to said first criterion from the rest of said hoppers such that the total weight of the hoppers selected according to said first criterion is within the reduced weight range.

16. The combination weighing apparatus according to claim 12, wherein said second criterion of said controller is configurable by the operator through said operation panel.

17. The combination weighing apparatus according to claim 12, wherein said second criterion of said controller is based upon a random number signal.

Sub A' cont'd

18. The combination weighing apparatus according to claim 12, wherein said second criterion of said controller is based upon periodic conditions.

19. The combination weighing apparatus according to claim 12, wherein said second criterion of said controller is based upon ratio conditions.

20. The combination weighing apparatus according to claim 16, wherein said controller further includes a continuous discharge criterion that is applied to said hopper to which said second criterion is applied, said hopper being continuously discharged under said continuous discharge criterion; and

said controller switches between said second criterion and said continuous discharge criterion upon the operator's input.